EmSafe: Investigating the Emergency Call Service in Australia and the Development of a Modern and Efficient Contact System

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Emergency Service Systems around the world have experienced unprecedented adverse effects during the Coronavirus pandemic, but few more so than Australia. Over thirty preventable deaths occurred in Victoria due to extensive Triple Zero waiting times in 2021 alone, highlighting the flaws of a poorly planned and developed Emergency Call Service. This research has designed a more inclusive alternative that has better operational management, functionality, and inclusivity for users. This adapted system will lower the waiting times for emergency calls and services to be more accessible to marginalized groups, including the elderly, people with disabilities, and non-English-speakers. Prototypes of a User App and Computer-Aided Dispatch were developed using modern technologies to improve the Emergency Call Service, including MySQL Database Technology, GPS Location Software, and SMS Technology. To support individuals in accessing Emergency Services, the User App includes automatically updating emergency phone numbers depending on the user's location, a hospital locator, and CPR Guides. Further, a new way of contacting Triple Zero using SMS Technology and automatic information uploads containing the user's case-specific data to Triple Zero Operators were developed for the final product. To maximize its user base, the app was created for use with the most popular mobile operating system in Australia, iOS, and also has a universal backend system so that it can be easily developed for other operating systems. This research exemplifies that the implementation of EmSafe nationwide will ensure that tens of millions of individuals can easily access Emergency Services and Healthcare quickly in their hour of need.

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